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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/578,689

05/09/2006

Tomas Lieback

3670-63

4425

23117 7590 05/29/2009  
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EXAMINER

AKINYEMI, AJIBOLA A

ART UNIT

PAPER NUMBER

2618

MAIL DATE

DELIVERY MODE

05/29/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/578,689	<b>Applicant(s)</b> LIEBACK ET AL.	
	<b>Examiner</b> AJIBOLA AKINYEMI	<b>Art Unit</b> 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Haapoja (Pub. No.: US 2002/0127982A1).

With respect to claim 1 and 4:

Haapoja discloses a method/means for processing a received electromagnetic signal in the microwave range, the signal comprising at least a first and a second carrier wave at respective first and second carrier frequencies (fig.3, item 240), comprising splitting the received signal into a first and a second branch (fig.3, I channel and Q channel), a first shifting of the carrier frequency of the signal in each of the branches by respective first frequency shifts (fig.3, item 225), filtering the signal in the first and the second branch in respective first filters a second shifting of the carrier frequency of the signal in each of the branches by respective second frequency shifts (fig.3, item 226A, 226B), which method is characterized in that there is a first frequency distance between the first frequency shifts, such that after the first shift (fig.3, item 225), the first carrier wave in the first branch (fig.3, I channel) has essentially the same center frequency as the second carrier wave in the second branch (fig.3, Q channel), the first filters (fig.3, item 226A) have essentially the same filter characteristics, so that the signal in each branch

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after the first filter (fig.3, item 226A) comprises only one of said first or second carrier wave, but at essentially the same center frequency.

With respect to claim 2 and 5:

Haapoja discloses a method wherein the second frequency shifting (fig.3, second shifting is being carried out in item 220A) is carried out by different shifts in each of the branches, the difference between the shifts in the branches corresponding to a desired frequency separation between the first and the second carrier waves (fig.3).

With respect to claim 3, 6, 8 and 10:

Haapoja discloses a method wherein the signals in the two branches are combined after the second frequency shifts, and then filtered and further processed (fig.3, the signal are combined in item 220A and filtered by item 182).

With respect to claim 7 and 9:

Haapoja discloses a method/means for processing a received electromagnetic signal in the microwave range, the signal comprising at least a first and a second carrier wave at respective first and second carrier frequencies (fig.3, item 240), comprising splitting the received signal into a first and a second branch (fig.3, I channel and Q channel), a first shifting of the carrier frequency of the signal in each of the branches by respective first frequency shifts (fig.3, item 225), filtering the signal in the first and the second branch in respective first filters, a second shifting of the carrier frequency of the signal in each of the branches by second frequency shifts (fig.3, item 226A, 226B), which method is characterized in that the first filtering in the first (fig.3, item 226A) and second (fig.3, item 226B) branch filters out one of the carrier waves in each branch, so that each branch,

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after the first filter, comprises only one of the carrier waves, and in that the second shift (fig.3, item 220A) is carried out by the same shift amount in both of the branches.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AJIBOLA AKINYEMI whose telephone number is (571)270-1846. The examiner can normally be reached on monday- friday (8.30-5pm) Est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, YUWEN PAN can be reached on (571) 272-7855. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Yuwen Pan/

Primary Examiner, Art Unit 2618